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## Parental Attachment and Adolescents' Emotional Adjustment: The Associations With Social Skills and Relational Competence

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Young people learn from their interactions with their parents how to initiate and maintain satisfying and warm friendships. Attachment with parents thereby plays an important role in adolescents' social and emotional adjustment. The model tested in this study proposes that the relation between parental attachment and emotional adjustment is mediated by social skills and relational competence. Structural equation modeling was used to estimate the models and paths between concepts using data from a sample of 412 12–18-year-olds. In the 12–14-year-old age group, no effects of parental attachment on social skills and relational competence were displayed. However, in the 15–18-year-old age group, parental attachment was moderately related to social skills, which, in turn, affected middle adolescents' competence in friendships and romantic relationships. Parental attachment and relational competence were significant predictors of adolescents' emotional adjustment in both age groups.

Parents furnish children with demonstrations and working models of how to organize their relationships with others and their representations of themselves (Bowlby, 1973, 1982). Parents who provide children with secure attachment relationships simultaneously provide them with the assurance that they are trustworthy and worthy of being loved and cared for (Bowlby, 1973). As they mature, these children are likely to become self-confident and healthy adolescents (Bowlby, 1982). Ample studies provide evidence for the link between parental attachment and emotional adjustment in adolescence (e.g., Armsden & Greenberg, 1987; Coopersmith, 1967; Lapsley, Rice, & Fitzgerald, 1990; McCormick & Kennedy, 1994). For example, Armsden and Greenberg (1987) found that parental attachment contributed positively to self-esteem and life satisfaction and negatively to measures of depression, anxiety, and feelings of alienation. Thus, parental attachment appears to enhance adolescents' well-being by increasing their self-esteem and diminishing feelings of depression. However, these studies do not elucidate which mechanisms link parental attachment to emotional adjustment. The present study examined the roles of social skills and relational competence as mediators of the relation between attachment and adolescents' emotional adjustment.

For most people, relationships with other people are central aspects of their lives. The development, maintenance, and dissolution of interpersonal relationships are sources of the most intense emotions in people's lives: a source of great joy and happiness when things go well (e.g., Scherer, Wallbott, & Summerfield, 1986) and a source of great distress and sorrow when things go badly (Bowlby, 1982). The literature leaves little doubt that people who have positive, lasting relationships are better off in a broad variety of ways (for reviews, see Baumeister & Leary, 1995; Finkenauer & Baumeister, 1997). Such people show a lower mortality rate (Berkman & Syme, 1979), less depression (Cutrona, 1989), and fewer psychological and physical health problems (DeLongis, Folkman, & Lazarus, 1988) than do people with weak social networks. Loneliness strongly linked to unhappiness and depression (Argyle, 1987).

Self-perceptions of relational competence can be assumed to play a crucial role in psychosocial functioning. Valued others serve as significant sources of reflected appraisal (e.g., He or she likes me, so I am an attractive person; Cooley, 1902; Sedikides & Skowronski, 1995), and thereby they play an important role in determining a person's self-esteem (e.g., Harter, 1993). In other words, what and how others think about one's self becomes incorporated in one's esteem. Specifically, perceiving oneself as a competent friend and romantic partner positively influences one's self-esteem, whereas perceiving oneself as lacking social competence negatively influences one's self-esteem (Harter, 1993) and may lead to (chronic) depressive feelings (e.g., Allgood-Merten, Lewinsohn, & Hops, 1990; Harter & Whitesell, 1996). As Campbell (1981) puts it, "Dissatisfaction with self has a more damaging effect on one's general feeling of well-being than dissatisfaction with any of the other domains of life" (p. 105). A longitudinal study by Cole, Martin, Powers, and Truglio (1996), for example, showed that sixth graders' perception of their relational competence predicted depression 6 months later, even when controlling for earlier depression. Thus, perceiving themselves as lacking

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relational competence appears to put young adolescents at risk for subsequent depression.

Early attachment researchers such as Ainsworth, Blehar, Waters, and Wall (1978) and Bowlby (1982) have argued that children internalize relationship experiences with their mother into internal working models. These models then structure and direct children's behavior in other social encounters. Young people learn from the interactions with their parents, for example, how to initiate and maintain satisfying and warm friendships. However, there are hardly any empirical studies that concentrate on the mechanisms that link parental attachment to adolescents' emotional adjustment. In an influential book edited by Parke and Ladd (1992), authors explored the mechanisms that link adolescents' functioning in family and peer systems. Social skills are proposed to constitute one of the mechanisms relating parental influence to the initiation of warm and satisfying peer relationships in adolescents (e.g., Buhrmester, 1990; Cooper & Cooper, 1992; Engels, Deković, & Meeus, *in press*).

### Attachment and Adolescents' Social Skills

Attachment theory predicts that attachment to parents may affect other social relationships of adolescents, such as romantic relationships and intimate friendships (Bowlby, 1982). Parental attachment may provide a set of expectations about how to interact with others and how to interpret the needs and feelings of others (Sroufe & Fleeson, 1986). Secure attachment may provide a framework in which adolescents feel safe and more secure to develop, with trial and error, social skills within the family and within peer settings (Kerns & Stevens, 1996; Youngblade & Belsky, 1992). However, a question remains as to whether the specific skills young people learn in their interactions with nuclear family members can easily be generalized to peer settings (Engels *et al.*, *in press*). Peer relationships are by nature more symmetrical and egalitarian (Buhrmester & Furman, 1986; Youniss & Smollar, 1985) than are relationships with parents. Also, peer relationships are complex in that adolescents operate differently in a chumship, in relationships with best friends, in their peer group, or with their classmates (Değirmencioğlu, Urberg, Tolson, & Richard, 1998). Given these features of adolescents' relationships outside the family, it is likely that the competencies required for satisfactory relationships with peers only partly overlap with skills required for relationships with family members. Empirical studies, however, have shown that parental attachment is positively related to social skills like negotiation, giving and receiving critiques, and giving positive feedback on others' performances (Bell, Avery, Jenkins, Feld, & Schoenrock, 1985; Nada Raja, McGee, & Stanton, 1992; Rice, 1990; Rice, Cunningham, & Young, 1997; Schneider & Younger, 1996). Thus, although young people may need different skills to function in peer and family settings, there is empirical support for the influence of parents on the development of social skills.

### Interpersonal Tasks and Relational Competence

The aforementioned studies suggest that higher parental attachment leads to enhanced social skills and subsequently to better functioning in peer networks. A study by Engels *et al.* (*in press*) showed that young people who are not capable of giving feedback

to others and who experience difficulties with initiating contact are less likely to be involved with friends, to have warm friendships, and to receive support from friends. In turn, because they are unable to maintain satisfying friendships, they lack the opportunities and experiences to test their capabilities and skills. Buhrmester (1990) found age effects in the relationship between interpersonal skills and involvement in close friendships in a study among 10–16-year-olds. The study's findings show that the detrimental effects of inadequate social skills become more prominent as the adolescent becomes older. Buhrmester suggested that friendships become not only more important but also more complex and demanding over time. If adolescents lack the necessary skills and, in turn, have less opportunities to develop them, they may end up in a vicious circle.

In the early to middle 1980s, Youniss and Smollar (1985) and Bigelow and LaGaipa (1980) pointed to the complexity of adolescents' social relationships. The playing skills in childhood are more simple and consist mainly of being a nice playing partner without being aggressive, hostile, and pestering. On the contrary, adolescents should not exclusively focus on their own needs and thoughts but need to have the ability to identify emotional states of others and to adequately respond to them (Parke & Ladd, 1992). A good example of the complexity of adolescents' social relationships has to do with the amount of disclosure in friendships. Selective disclosure of personal information is an effective tool used to regulate the development of intimate relationships. People use superficial disclosure when talking to a stranger or when wanting to prevent a relationship from developing any further. However, they use intimate disclosure when talking to a friend or when wanting to intensify a relationship (Miell & Duck, 1986). Thus, friendships become more complex in adolescence, and youngsters need specific skills to maintain social relationships—skills that are quite similar to those in mature adult romantic relationships and friendships. Those who do not perform these skills adequately are likely to experience increasing difficulties in maintaining satisfying peer relationships (see Fullerton & Ursano, 1994).

In summary, social skills and relational competence are assumed to be elements of the working models (Ainsworth *et al.*, 1978; Bowlby, 1982) that explain how parental attachment is connected to emotional adjustment in adolescence. Adolescents who are attached to their parents should be better able to develop adequate social skills, which are necessary for the initiation and maintenance of warm, satisfying, and reciprocal relationships with friends and romantic partners. Adolescents' own relational competence, in turn, is most important for young people's emotional adjustment (see Figure 1).

Insights into the mechanisms that link attachment to emotional adjustment have important benefits for counseling psychology (see Kenny & Rice, 1995; Lopez, 1995; Mallinckrodt, 1995, for a discussion on this issue). If the suggested relations between attachment to parents and adolescents' social skills and relational competence were to be confirmed, the implications of our suggestions for counseling are far-reaching. For example, counseling interventions could focus not only on the problem and its associated symptoms (e.g., lack of social skills), but they could also treat its roots (i.e., attachment to parents). The counseling process could incorporate many elements of the relationships between parents and adolescents (e.g., trust, acceptance, empathy), so as to enhance

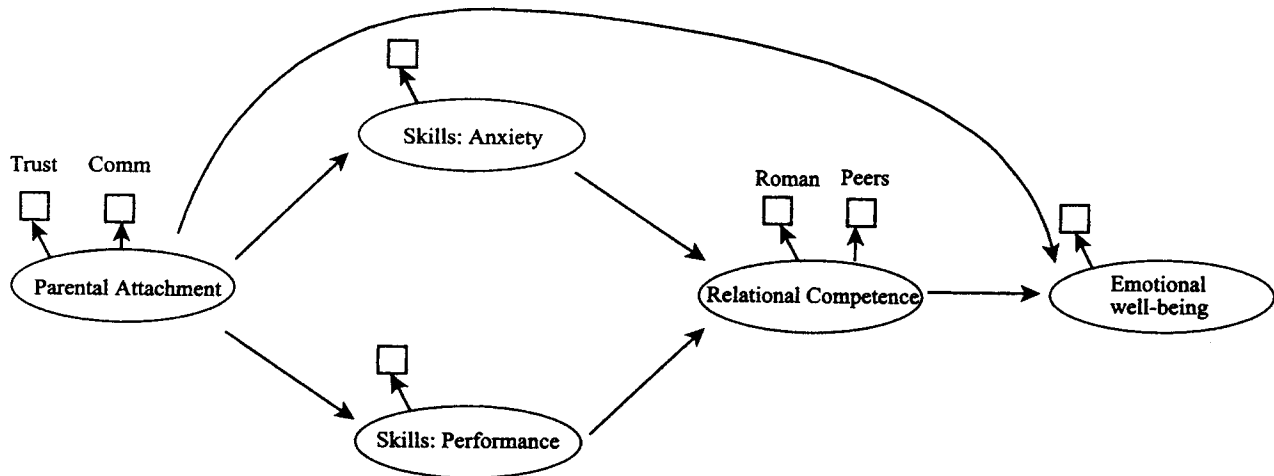


Figure 1. Theoretical model for relation of parental attachment to social skills, relational competence, and emotional adjustment. Trust = parental trust; Comm = communication with parents; Roman = romantic competence; Peers = competence in peer relations.

attachment and, simultaneously, facilitate the development of social skills and relational competence (see Lopez, 1995).

#### Age Effects of Parental Attachment in Adolescence

The relevance of having adultlike social skills may not only become more significant in adolescence, but it is also possible that the impact of parental attachment on the formation of adequate social skills is stronger for middle and late adolescents than it is for early adolescents. Because this may seem to be a counterintuitive hypothesis, we provide explanations for this perspective. This perspective is consistent with the view that although adolescence is a period of separation, parents remain influential in many domains (e.g., Bogenschneider, Wu, Raffaelli, & Tsay, 1998; Brown, Mounts, Lamborn, & Steinberg, 1993). Parents continue to transmit their values and socialization goals to their offspring directly, for instance, by monitoring his or her whereabouts and trying to protect him or her from "bad company" and indirectly by affecting their offspring's values, behaviors, and social skills.

Because early adolescence is characterized with an entrance into secondary school and with the development of new friendships, youngsters may feel the need to distance themselves from the parental ties. Steinberg (1990) showed that early adolescents' closeness to parents wanes, and perturbations with parents emerge during this period. Fuligni and Eccles (1993) suggested evidence for the reinterpretation of the relationship between early adolescents and their parents. Those youngsters who feel that their parents do not loosen their power and control are more likely to orient themselves toward peers. A few years later, when youngsters have been functioning in friendships and intimate relationships for some time, they may have less need to question parental values and norms.

#### The Present Study

This study used cross-sectional self-report data from 412 12–18-year-olds to examine the effects of parental attachment on the devel-

opment of social skills, relational competence, and emotional adjustment. We formulated three central hypotheses. First, we expected that higher parental attachment would be associated with stronger confidence in social skills and higher frequency of social skills, which, in turn, would be positively related to perceived relational competence and emotional adjustment. Second, we expected that there would be a direct, positive association of parental attachment with adolescents' emotional adjustment (a partially mediated model). Third, we expected that the associations of parental attachment with social skills and relational competence would be stronger in middle adolescence than it would be in early adolescence, and that the necessity to have adequate social skills to establish satisfying peer relationships for emotional adjustment would be more pronounced in middle adolescence than it would be in early adolescence.

Our cross-sectional survey contributed to other studies on parental influence on adolescent adjustment in several ways. First, the theoretical model proposed here links adolescent functioning in family and peer systems by means of specific mediating mechanisms (or working models, as Bowlby, 1982 and Rice et al., 1997 put it). Second, we used a sophisticated analytic strategy (i.e., structural equation modeling) to test the specified links between concepts. Third, we did not incorporate age effects in the model as control variables, but we formulated specific theoretically based expectations regarding the paths in advance. Consistent with recent studies on the ongoing impact of parents in adolescence, we expected that parental attachment would be more strongly related to adolescents' social skills and relational competence in middle adolescence than it would be in early adolescence. Fourth, we used two theoretically important indicators of adolescents' emotional adjustment, self-esteem, and depressive mood.

#### Method

##### *Procedure and Sample Characteristics*

Data for analyses were derived from the study, "Parenting in the Netherlands" (Rispen, Hermanns, & Meeus, 1996), a large-scale survey con-

ducted among 508 12–18-year-olds. The central aims of the research project were to describe the contemporary child-rearing practices of parents, to make an inventory of parents' needs concerning child-rearing support and their satisfaction with available support, and to examine the relationships between determinants of parenting and the quality of parenting and child development (Gerrits, 2000; Noom, 1999; Rispen et al., 1996). Respondents were selected and enlisted by Intomart, a research institute, from a panel of households that was controlled for representativeness. Respondents were selected from the panel if their parents had been born in the Netherlands and if they were in the age range of 12–18 years old. Fifty-two percent of the originally selected respondents were not inclined to participate. The most important reason for refusal to participate was a lack of informed parental consent. Previous reports on the present study showed that this attrition led to an underrepresentation of lower-class families and adolescents from single-parent families compared with national data (Vergeer & Hermanns, 1996). Nonetheless, on some other measures on which we could compare our sample with other national surveys, our sample appeared to be quite representative. For example, the prevalence of severe behavioral and emotional problems in our study, reported on the Child Behavior Checklist (Achenbach & Edelbrock, 1983) was comparable with Dutch studies conducted by Verhulst and colleagues (e.g., Verhulst, Van der Ende, & Koot, 1996).

Participants were approached at their homes by a research assistant. Administration of the self-report questionnaires took place in the presence of this assistant so that the assistant could ensure that adolescents filled out the forms on their own and so that the assistant could answer possible questions about the forms. A part of the sample was also involved in an observation study on parent–child interactions. However, in this article, we focused only on the questionnaire data.

In total, 254 boys and 254 girls participated in this study. A total of 252 respondents were between 12 and 14 years old (early adolescents) and 256 were between 15 and 18 years old (middle adolescents). The mean age of the group of early adolescents was 13.0 ( $SD = 0.82$ ). In this group, 51 respondents (25%) were in primary school and 201 respondents (75%) were in some kind of secondary school. Twenty-eight percent of the early adolescents reported that their parents were Catholic, 24% were Protestant, 2% were Humanistic, 6% had a different religion, and 40% had no religion. The majority of the early adolescents (93%) lived with two parents, 6% of the adolescents' parents were divorced or separated, and 1% was widowed. The mean age of the group of middle adolescents was 16.5 ( $SD = 1.09$ ). Almost all middle adolescents were enrolled in school, with the majority (93%) in some kind of secondary school. Thirty-two percent of the middle adolescents reported that their parents were Catholic, 25% were Protestant, 1% was Humanistic, 5% had a different religion, and 37% had no religion. The majority of the middle adolescents (89%) lived with two parents, 9% of the adolescents' parents were divorced or separated, and 2% were widowed.

Some of the respondents did not provide complete data on the model variables in the present study. We selected only those respondents for our analyses for whom we had complete data on all measures. Thus, from the original sample of 508 adolescents, 412 (81%) adolescents were included in our analyses.

## Measures

All concepts used in the present study were assessed by self-reports. Thus, as we speak about, for instance, parental attachment, we focus on the perception of adolescents of the bond with their parents. No information on parental attachment was given by the parents themselves. Thus, if we found that parental attachment was directly related to adolescent emotional adjustment, this finding was viewed through the eyes of the adolescent, not through those of the parents. In addition, as we speak about high relational competence, we imply that the adolescents judged themselves as competent in social relations.

The scales on parental attachment, relational competence, self-esteem, and depression are originally in the English language. Some instruments had to be translated by the research team using a translation–back-translation procedure.

**Parental attachment.** Parts of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) were used to measure parental attachment. The IPPA attempts to measure parental attachment by assessing the “affectively toned cognitive expectancies” (Armsden & Greenberg, 1987, p. 431; see review of self-report measures of parent–adolescent attachment by Lopez & Gover, 1993) associated with internalized representations of each attachment. The instrument derives from the theoretical assumptions of attachment theory (Bowlby, 1982) concerning the affective–cognitive dimensions of trust in the accessibility and responsiveness of attachment figures (Lyddon, Bradford, & Nelson, 1993). It should be noted that the IPPA does not allow the classification of attachment styles; the subscales of the IPPA are indicative of the relative degree of perceived parental security by adolescents. Empirical research on the psychometric properties of the scale showed high internal consistencies (e.g., Armsden & Greenberg, 1987; Nada Raja, McGee, & Stanton, 1992; Papini, Roggman, & Anderson, 1991; Paterson, Pryor, & Field, 1995). Furthermore, a high 3-week test–retest reliability has been reported, and the scale appears to possess convergent validity (Armsden & Greenberg, 1987).

The two subscales of the IPPA, Trust and Communication, were used. Both scales consist of four items that were filled out for the father and the mother separately. An example of an item on the subscale Trust is “My mother (father) respects my feelings,” and an example of an item on the subscale Communication is “I always tell my mother (father) about my problems and worries.” Response categories ranged from 1 (*never*) to 4 (*almost always*). In the present study, the ratings for the father and the mother were added. Cronbach's alphas were .76 for the eight items concerning trust and .79 for the eight items concerning communication.

The adolescent version of the Scale for Interpersonal Behavior (SIG; Arrindell, De Groot, & Walburg, 1984; Bijstra, Jackson, & Bosma, 1995), a measure used to assess the anxiety of adolescents to perform their social skills and the frequency of engagement in social skills, was used. The questionnaire includes four subscales assessing (a) expression of negative feelings, 14 items; (b) expression of own insecurity, 13 items; (c) expression of oneself by making contacts and giving one's own opinion, 9 items; and (d) expression of positive feelings, 8 items. For each item, respondents were asked to indicate how anxious they feel in the situation and how often they perform these behaviors. Responses were given on a 5-point scale ranging from 1 (*absolutely not afraid / not very often*) to 5 (*very afraid / very often*). The scores on the 44 items of the four subscales (for both anxiety to perform social skills and performance of social skills, separately) were added to get one score on both dimensions of social skills. The alphas for the scales were satisfactory: .90 for the Anxiety scale and .89 for the Performance scale. The distinctiveness of the two subscales is reflected in the moderate correlation ( $-.27, p < .001$ ). Thus, frequently engaging in a behavior does not necessarily reduce feelings of anxiety and vice versa.

Earlier studies have shown that the Anxiety and Performance scales have correlated in the expected direction with measures of adolescents' social acceptance, global self-worth, coping behavior, psychosocial health, and quality of life (Bijstra, Bosma, & Jackson, 1994). Furthermore, the internal consistency and the external validity of the SIG also have been examined in clinical samples (see Arrindell et al., 1984). The SIG is widely used in the Netherlands as a diagnostic instrument (Arrindell et al., 1984) and as an outcome measure for social skills training (see Bijstra & Jackson, 1998). The test–retest reliability has proven to be satisfactory: .85 for the Anxiety scale and .73 for the Frequency scale with an interval of 30 days and .70 and .48, respectively, with an interval of 70 days (Arrindell et al., 1984).

**Relational competence.** Two scales of the adolescent version of the Perceived Competence Scale for Children (Harter, 1985; for more details, see review article in Harter, 1993), assessing adolescents' perceptions of

their own competence in the domains of romantic relationships and peer relations, were used. Each scale is composed of five items, and each item consists of a pair of statements. This format is designed to reduce the effects of a pull for social desirability. Respondents have to decide which of the two items better describes them and rate whether that item is *sort of true* or *really true* for them. Therefore, each item had four response categories. In the present study, the internal consistencies for the scales were .56 for Romantic Competence and .70 for Peer Competence. These internal consistencies are comparable with the estimates Harter often finds in her studies, although the Cronbach's alpha appears to be somewhat lower in the present study. In addition, with respect to the validity of this instrument, considerable data have been presented on its convergent, discriminant, and construct validity (for a report on the construction of the instrument, see Harter, 1982, 1993; and for the manual, Harter, 1985).

**Emotional adjustment.** Rosenberg's (1965) Self-Esteem Scale measures adolescents' perceived self-value or sense of worth. A 10-item scale was used. Responses were made on a 4-point scale ranging from 1 (*very descriptive of me*) to 4 (*not at all descriptive of me*). Internal consistency of this scale is .85. Rosenberg's Self-Esteem Scale is one of the most frequently used assessments of general self-esteem. Gray-Little and Williams (1997) carried out an extensive study on the psychometric properties of this scale and found high internal consistencies (alphas between .72 and .85) and high test-retest reliabilities of .82 with an interval of 2 weeks and .63 with an interval of 6 months.

Kandel and Davies's (1982) Depressive Mood List assesses the extent to which adolescents experience negative moods. Respondents rate how often they have experienced negative feelings in the past 12 months. Responses on six items were given on a 6-point scale ranging from 1 (*never*) to 6 (*always*). Internal consistency of this scale is .75. The Depressive Mood List is extensively used in adolescent surveys (see review on depression measures by Compas, Ey, and Grant, 1993). Previous studies have shown sufficient internal consistency reliability, test-retest reliability, and stability over moderate periods of time (Kendall, Cantwell, & Kazdin, 1989).

### Strategy for Analyses

First, descriptive analyses (raw *M*s and *SD*s) of the variables for the two age groups (12–14-year-olds and 15–18-year-olds) were calculated. In addition, simple correlations were computed to explore the univariate relations. These data were used as input for construction of covariance matrices in the structural equation modeling analyses.

Second, a structural model was developed relating attachment to parents, social skills, relational competence, and emotional adjustment on the basis of theoretical assumptions in which (a) the latent variable, parental attachment, measured by the IPPA scales, Trust and Communication, predicts the manifest variables of anxiety to perform and performance of social skills (i.e., subscales of the SIG); (b) anxiety to perform and performance of social skills predict the latent variable of relational competence, measured by the indicators of peer competence and romantic competence; and (c) relational competence predicts the manifest variable of emotional adjustment, assessed by a single indicator, either self-esteem or depression. Notice that separate models were estimated for the endogenous constructs, self-esteem and depression. In line with the hypotheses, a direct path between parental attachment and emotional adjustment was included in the model.

Covariance structure models were estimated and fitted with LISREL 8.12 using the maximum likelihood method (Jöreskog & Sörbom, 1993). An initial model was estimated with only the set of theoretically predicted paths described above (see Footnotes 1 and 2). If necessary, the initial model was improved with local fit measures. The model could be extended by adding parameters (i.e., causal paths or residual correlations) as suggested by the so-called *modification indices*. The model could be reduced by skipping parameters if these parameters were not statistically significant as suggested by the *t* tests. Modifications were carried out only if they

made sense and if the model remained identified. Model fit was assessed by the following global fit measures: the chi-square, the normed fit index (NFI; Bentler & Bonett, 1980), the non-normed fit index (NNFI; Tucker & Lewis, 1973), and the standardized root-mean-square residual (SRMR). Formally, the chi-square provides a significance test of the null hypothesis that the model is correct. However, the chi-square is known to depend strongly on the sample size (see Footnote 3), such that in large samples models may be rejected because of minor specification errors, and in small samples models may be maintained in spite of major misspecification. The NFI and NNFI are much less dependent on the sample size and are generally accepted as descriptive goodness-of-fit statistics for LISREL models (Bollen, 1989; Jöreskog & Sörbom, 1993). Both are based on a comparison of the model chi-square with the chi-square of an independence model that predicts zero correlations. NFI and NNFI should be near 1.00, or at least above 0.90, for a model to be acceptable. The SRMR is a measure of average difference between the observed and the fitted covariance matrix. With covariances as input, a SRMR below 0.05 is a reasonable criterion.

## Results

### Correlational Analyses

In the group of early adolescents, indicators of parental attachment, trust in parents, and the quality of communication with parents, were not related to anxiety to perform social skills and the actual performance of social skills (see Table 1). In contrast, in the group of middle adolescents, indicators of parental attachment were significantly related to social skills: Those with high levels of trust in their parents and with good communication indicated that they were less anxious in performance of social skills and that they performed social skills more frequently. We observed the same pattern between age groups for the associations between social skills and adolescents' perceived relational competence. We found no significant relations in the younger age group, whereas the two subscales of social skills were related to perceived competence in middle adolescence. Perceived parental attachment was significantly related to emotional adjustment in both age groups: Adolescents who were strongly attached to their parents reported higher levels of self-esteem and lower levels of depression. An-

<sup>1</sup> As Jöreskog and Sörbom (1993) suggested, in longitudinal studies there are tendencies for measurement errors to correlate over time because of retest effects. Although in the present study we do not have a longitudinal design, the Anxiety and Performance scales of the SIG consist of identical items but with other response scales. In these variables, correlated residuals were modeled.

<sup>2</sup> The coefficients between latent variables with only one indicator variable are not 1. A relationship of 1 would indicate that there is no measurement error. As this is an implausible assumption, we used the suggestion by Jöreskog and Sörbom (1993, p. 37) to use Cronbach's alpha to estimate the error variance of indicator variables as follows:  $(1 - \alpha) \times \text{variance}$ .

<sup>3</sup> There are differences in the number of respondents included in the descriptive analyses and in the LISREL analyses. This is because of missing data. Respondents who had more than one missing value on the model variables were excluded from subsequent analyses testing the theoretical models. Thus, we did not use a strategy to deal with missing data but decided to use only respondents with complete data. In this way, we know that the findings are not affected by analytic strategies to deal with missing data. Nonetheless, it should be stressed that this procedure leads to a significant drop in the number of respondents in the main analyses.

Table 1  
Pearson Correlations Among Adolescent Measures by Age Group

Measure	1	2	3	4	5	6	7	8
1. Parental communication	—	.59***	-.17**	.19**	.14*	.18**	.23***	-.16*
2. Parental trust	.66***	—	-.24***	.18**	.08	.18*	.33***	-.22**
3. Social skills: Anxiety	.04	.04	—	-.37***	-.42***	-.40***	-.47***	.28***
4. Social skills: Performance	.02	.05	-.21**	—	.30***	.26***	.17*	.02
5. Romantic Competence	.03	.03	-.34***	.04	—	.55***	.38***	-.28***
6. Peer Competence	.01	.03	-.26***	.10	.51***	—	.29***	-.23***
7. Self-esteem	.31***	.32***	-.14*	.04	.25***	.24***	—	-.47***
8. Depressive mood	-.19**	-.27***	.12	.09	-.20**	-.11	-.35***	—

Note. Data for the 12–14-year-old group are below the diagonal; data for the 15–18-year-old group are above the diagonal.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

other difference between age groups in our data concerned the relations between social skills, on the one hand, and self-esteem and depressive mood, on the other hand. Although both subscales of social skills were not related to these indicators of emotional adjustment in early adolescence, significant relationships were apparent for middle adolescents. In particular, lower anxiety to perform social skills was strongly related to higher self-esteem and fewer feelings of depression.

We conducted additional analyses to test whether the correlations were different for boys and girls. We used  $z$  tests to examine gender differences in the strength of correlations between model variables (Van de Brink & Koele, 1993). It appeared that for the 12–14-year-olds, none of the 28 comparisons in correlations was significant at  $p < .05$ . For the 15–18-year-olds, only 3 of the 28 comparisons in correlations were significant at  $p < .05$ . This shows that, at least in our data, there are no significant gender differences in the strength of associations among parental attachment, social skills, relational competence, and emotional adjustment.

### Structural Equation Models

**12–14-year-olds.** We tested an initial model with paths as hypothesized. The initial model fitted the data very well:  $\chi^2(12, N = 205) = 4.63, p = .97, NFI = 0.98, NNFI = 1.00, SRMR = 0.02$ . The modification indices suggested no further model extensions. Model reduction was done by testing each free parameter for significance with  $\alpha < .05$ . We removed three nonsignificant paths from the initial model: the two paths between parental attachment and the subscales measuring anxiety to perform and performance of social skills and one path from performance to relational competence. The final model fitted the data well with statistics:  $\chi^2(12, N = 205) = 4.72, p = .97, NFI = 0.98, NNFI = 1.00, SRMR = 0.02$  (see Figure 2).

In the final model for early adolescents, we found direct effects of parental attachment and relational competence on self-esteem. High parental attachment and high relational competence were related to high self-esteem. No significant associations among perceived parental attachment and social skills and relational competence were shown. Relational competence appeared to operate as a mediator between adolescents' anxiety to perform social skills and self-esteem. Early adolescents who were anxious to perform social skills were less competent in their peer relations and, in turn, reported lower levels of self-esteem. Inspection of the proportions

of total and indirect effects showed that there was an indirect effect of  $-.16$  ( $p < .01$ ) of anxiety to perform social skills on levels of self-esteem, showing that an essential criterion to test eventual mediation, namely that the independent, dependent, and mediation variables should be correlated, was met.

The initial model for the prediction of depressive mood provided an excellent fit:  $\chi^2(12, N = 205) = 12.63, p = .40, NFI = 0.95, NNFI = 1.00, SRMR = 0.04$ . The modification indices suggested no further model extensions. We omitted three nonsignificant paths (the same paths as in the model for self-esteem) from the initial model resulting in a well-fitting model:  $\chi^2(12, N = 205) = 12.70, p = .39, NFI = 0.95, NNFI = 0.99, SRMR = 0.04$ . The standardized estimates of this model are presented in Table 2. The final model for the prediction of depressive mood in early adolescents included similar paths between variables as the model predicting self-esteem. Adolescents who were strongly attached to their parents and who were competent in their peer relations had fewer feelings of depression. In addition, relational competence was affected by the levels of anxiety to perform social skills. The calculation of the total and indirect effects of the independent variable and the mediating variable showed that the anxiety to perform social skills was significantly related to depressive mood ( $\beta = .13, p < .05$ ). Because the structural equation model analyses showed that the direct effect of anxiety to perform social skills on depressive mood disappeared when relational competence was included as a mediating variable, we have confidence in interpreting these relationships as a mediating mechanism, at least in our cross-sectional study.

**15–18 year-olds.** We estimated an initial model with all pathways as was hypothesized for the 12–14-year-old age group. This model for self-esteem fitted the data satisfactorily:  $\chi^2(12, N = 207) = 30.15, p < .01, NFI = 0.91, NNFI = 0.90, SRMR = 0.04$ . Examination of the modification indices showed that the model fit could be further improved by freeing one path between the anxiety to perform social skills and self-esteem. Freeing this parameter resulted in a good fit of this model with statistics:  $\chi^2(11, N = 207) = 15.36, p = .17, NFI = 0.96, NNFI = 0.97, SRMR = 0.03$ . The modification indices suggested no further model extensions. Standardized parameter estimates obtained from the final model are displayed in Figure 3. The findings showed that parental attachment affected both aspects of social skills: Adolescents with high parental attachment reported less anxiety in performing social skills and performed social skills more frequently. Furthermore,

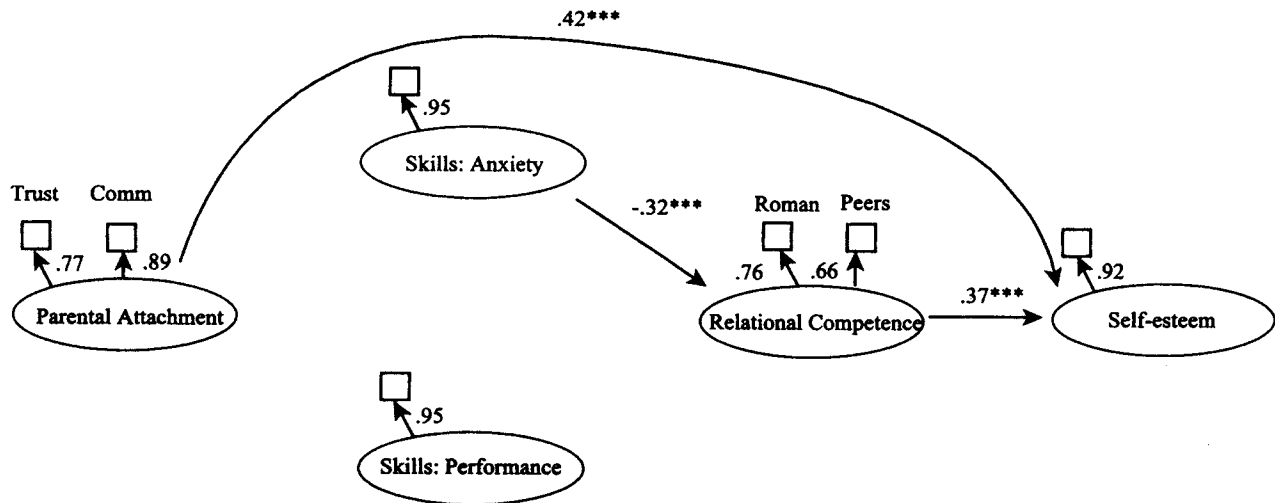


Figure 2. Structural model for relation of parental attachment to social skills, relational competence, and self-esteem in the group of 12–14-year-olds. All coefficients are standardized values. Trust = parental trust; Comm = communication with parents; Roman = romantic competence; Peers = competence in peer relations.

social skills were related to adolescents' perceived competence in relationships with friends and romantic partners. Although their competence in social relations in turn predicted level of self-esteem, parental attachment and anxiety were also directly related to self-esteem. Thus, relational competence did not fully mediate the effects of parental factors and social skills on self-esteem. Calculation of the total and indirect effects showed that parental attachment was related to relational competence ( $\beta = .24, p < .001$ ), and performance of social skills was related to self-esteem ( $\beta = .06, p < .05$ ). When, subsequently, social skills and relational competence were included in the model as mediating variables, it appeared that these direct relationships disappeared, providing empirical evidence for the existence of mediating mechanisms.

With respect to depressive mood, we estimated an initial model. Again, this initial model fitted the data reasonably well:  $\chi^2(12, N = 207) = 23.90, p < .02, NFI = 0.92, NNFI = 0.93, SRMR = 0.04$ . Examination of the modification indices showed that the model fit could be further improved by freeing one path between the social skills subscale measuring performance and depressive mood. Freeing this parameter resulted in a satisfactory fit of this model with statistics:  $\chi^2(11, N = 207) = 12.81,$

$p = .31, NFI = 0.96, NNFI = 0.99, SRMR = 0.03$ . The modification indices suggested no further model extensions. Standardized parameter estimates from the final model are shown in Table 2.

The findings are quite comparable with the model predicting self-esteem. Middle adolescents who reported high parental attachment indicated that they performed social skills more often and were less anxious to perform these skills. Social skills did not fully mediate the relation between perceived parental attachment and depressive mood: We observed a direct path between attachment and depressive mood. In addition, we found strong relationships between both social skills scales and relational competence. Relational competence, performance of social skills, and parental attachment were directly related to depressive mood. Calculation of the total and indirect effects showed that parental attachment was significantly related to relational competence ( $\beta = .24, p < .001$ ) and the anxiety to perform social skills to depressive mood ( $\beta = .22, p < .05$ ). Nonetheless, the indirect effect of parental attachment on depressive mood was nonsignificant, and the indirect effect of performance of social skills on depressive mood was nonsignificant.

Table 2

Total Effects of Model Variables: Models for Depressive Mood in the Two Age Groups

Variable	1	2	3	4	5
1. Parental attachment		-.31***	.24**	—	-.28**
2. Social skills: Anxiety	NS		—	-.54***	—
3. Social skills: Performance	NS	—		.32***	.27**
4. Relational competence	—	-.46***	NS		-.42***
5. Depressive mood	-.31***	—	—	-.26**	

Note. Data for the 12–14-year-old age group are below the diagonal; data for the 15–18-year-old age group are above the diagonal. Only the findings of the final model are presented. All coefficients are standardized values. NS = Parameter nonsignificant in initial model and omitted from the final model. Dashes indicate that this parameter was not included in the initial or final models (see Figure 1).

\*\*  $p < .01$ ; \*\*\*  $p < .001$ .



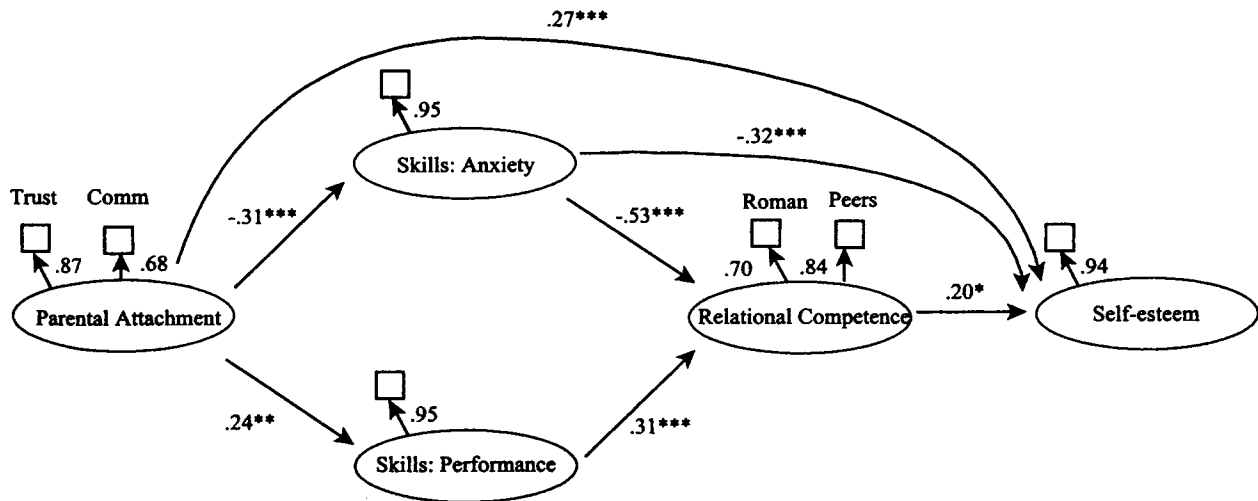


Figure 3. Structural model for relation of parental attachment to social skills competence and self-esteem in the group of 15-18-year-olds. All coefficients are standardized values. Trust = parental trust; Comm = communication with parents; Roman = romantic competence; Peers = competence in peer relations. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Comparison of age groups.** In our data set, the pathways from parental attachment, social skills, and relational competence to emotional adjustment were quite different for the two age groups. The most striking difference was the lack of relations between parental attachment and social skills of early adolescents. Apparently, good communication with parents and trust in parents did not affect early adolescents' anxiety to perform and performance of social skills. However, middle adolescents' attachment to parents was strongly related to social skills. Furthermore, the role of anxiety to perform social skills was more prominent for middle adolescents. According to the models for self-esteem, middle adolescents' anxiety was not only related to their competence in peer relations but also directly affected their feelings of self-worth. For early adolescents, the association between anxiety and relational competence was weaker, and we found no direct link with self-esteem.

**Comparison of models for self-esteem and depressive mood.** We tested models for depression and self-esteem as endogenous variables. The similarity in the findings is most striking; only a few differences showed up. Our data showed that the link between peer competence and emotional well-being was stronger for depressive mood ( $\beta = .42$ ) than it was for self-esteem ( $\beta = .20$ ). In addition, we found a direct relationship between the anxiety to perform social skills and self-esteem, whereas in the case of depressive mood, the actual performance of social skills was related to feelings of depression in the 15-18-year-old age group.

### Discussion

Young people have to learn to detach from their parents, to be more autonomous, and to build up their own social relationships. Despite adolescents' increasing independence, parents continue to play an important role in their social and emotional adjustment (e.g., Bogenschneider et al., 1998; Brown et al., 1993; Parke & Ladd, 1992). Early research on parental attachment has convincingly shown that children internalize the experiences with their

parents into internal working models that direct their actions in social situations outside the family (Ainsworth et al., 1978; Bowlby, 1982). More recent research showed that a safe, secure, and supportive family background is related to adolescents' quality of relationships with friends and intimate partners and emotional adjustment (see review by Rice, 1990). The present study proposed and tested an explanatory model in which parents were hypothesized to affect the development of adolescents' interpersonal skills, such as criticizing, providing positive feedback, and being assertive. The anxiety to perform and performance of interpersonal tasks was predicted to influence young people's perceptions of their competencies in initiating and maintaining good relationships with friends and romantic partners. Relational competence, in turn, was expected to affect young people's emotional adjustment.

In our study, the proposed model provided an excellent fit for middle adolescents, and the magnitude of the paths between the concepts was convincing. Our data illustrate that in middle adolescence, with increasing complexity and diversity of peer relations, perceived parent-adolescent interactions are helpful in providing less anxiety to perform social skills as well as in improving the actual performance of skills required for the initiation and maintenance of satisfactory peer relations. Our findings are consistent with existing evidence concerning the mediating role of social skills and relational competence in middle and late adolescence (Holahan, Valentiner, & Moos, 1994; Rice et al., 1997).

There were significant differences between the models for the two age groups in our study. Contrary to our prediction, the findings failed to reveal significant paths between attachment, social skills, and relational competence for early adolescents. The most attractive and simple explanation for this is that the theoretical models differ by age. In a study on early adolescents, Kenny, Moilanen, Lomax, and Brabeck (1993) suggested that in this period of life, self-perceptions (view of the self) mediate the relation between attachment and depression. The impressive biological changes in early adolescence lead to a preoccupation with

physical acceptability and adequacy (Finkenauer, Engels, Meeus, & Oosterwegel, in press). Furthermore, early adolescents experience important changes in academic standards in high school, compared with their primary school period, that greatly affect how early adolescents see themselves (e.g., Cotterell, 1992). It is possible that the impact of biological and academic changes on emotional adjustment outweigh social skills and relational competence as concepts mediating the link between parental attachment and emotional adjustment in early adolescence.

A second explanation for the observed difference in age groups between models concerns the type of relationship that adolescents have with their parents. It is possible that parents are more accepting of young adolescents; their relationship with them may be unconditional. If this is true, younger adolescents may have a working model of "It does not matter what I do or do not do, my parents will still love me." In contrast, parents may be less accepting (at least in the eyes of the adolescents) and more conditional in the case of older adolescents. This suggestion is consistent with ideas on increasing symmetry in parent-child relations throughout adolescence. The increasing symmetry and equality in parent-child relations may result in stronger (perceived) demands and expectations regarding their offspring's social performance.

We did not expect that social skills and relational competence would fully mediate the association between self-reported parental attachment and emotional adjustment. Consistent with our hypothesis, our data show strong direct effects of parental attachment on adolescent adjustment in all models. Further research should reveal whether there indeed is a direct relation between a warm, supportive, and stimulating bond with parents and the emotions, feelings, and moods of adolescents or whether other underlying mechanisms, besides those we examined in the present study, are operative in early and middle adolescence.

### *Implications for Practice*

The results of this study may have implications for practice. The rising empirically based insights into different working models may help counseling psychologists to develop effective tools for prevention of depression and low self-esteem and their adverse consequences in adolescence. The involvement and interests of parents in adolescents' lives affect their performance and well-being in several domains. Therefore, as Bogenschneider et al. (1998) aptly put it, "... parent educators should recommend that, when it comes to peer relationships, parents should not 'buzz off' but instead 'butt in' by being responsive and available to their adolescents" (p. 1685). Furthermore, early interventions may prevent youngsters from developing inadequate social relations with peers. Because negative experiences within the family may affect adolescents' peer relationships, it would be useful to counterattack a negative spiral early in life—that is, in adolescence—when people have to balance and restructure their relationships with important others, such as parents, friends, and partners.

In the case of depression and low self-esteem, an often used strategy is to provide intensive social skills training for adolescents with social and mental problems (Haney & Durlak, 1998). The differentiation in anxiety to perform and actual performance of social skills in the SIG is very useful in this respect because our study clearly indicates that not only does the actual engagement in social situations affect adolescents' social competence (see Bijstra

et al., 1994; Bijstra & Jackson, 1998; Buhrmester, 1990) but so do their feelings of anxiety concerning the performance of these skills. The impact of the Anxiety subscale of the SIG can also be understood as an indicator of neuroticism in social situations which makes the strong relations between perceived social competence and emotional adjustment even more comprehensible. In summary, it is not very effective to intensively train adolescents in using the required skills without paying attention to the confidence they have in performing these skills (see the work of Bandura, 1997, on self-efficacy). Programs should focus more strongly on the interplay between young people's negative feelings about their engagement in social situations and their actual performance.

Shaver and Norman (1995) argued that it is necessary to acknowledge aspects such as the gender and culture of the client in counseling psychology to translate the findings of theoretically based research for practice. An important message of our study is that counselors should consider the adolescents' age. For both age groups, relational competence and parental attachment significantly contributed to positive feelings about oneself. However, in the older age group, perceived parental attachment affected adolescents' social skills and, subsequently, their relational competence, whereas in the younger age group, parental attachment was directly related only to the adolescents' well-being. More specifically, it appears that middle adolescents' emotional feelings about their social skills are especially sensitive to the faith and trust they experience in their relationship with their parents. The strong influence of perceived parental attachment on the anxiety to perform and the actual performance of social skills in middle adolescence suggests that social skills training may be redundant if, at the same time, counselors do not work on the insecure and unsafe bond of the adolescent with his or her parents. However, before parents become actually involved in counseling, it is important to verify whether the relations we found in the present study would also appear if assessments of parental attachment were obtained from the parents themselves. In this way, researchers would be able to check the similarities and differences in perspectives on parental attachment by adolescents and their parents. For the younger age group, perceived parental attachment and social skills independently contributed to emotional well-being. This implies that although it is still relevant to focus our efforts on parents, we cannot expect that changing parents (or adolescents' perceptions of their parents) results in adolescents' being more socially skilled or socially competent.

### *Limitations of the Study*

The cross-sectional design of the present study does not permit drawing definite conclusions about the directions of paths. Regarding the association between social skills and relational competence, for example, the reverse direction is also possible. High involvement in friendships could also result in less anxiety in performing social skills. With respect to the role of parents, paths could be in the opposite direction than those hypothesized. Some adolescents drop out of a peer group because they do not exhibit the required skills to act and behave adequately. Observing that their child is dissatisfied and lonely may elicit different reactions from parents. Some parents may react lovingly and supportively, encouraging their child to initiate new contacts. Other parents may not get involved (e.g., it is her or his own business) or may even

react negatively. To examine these complex interactional and dynamic processes, finely grained longitudinal analyses are required.

The data in the present study are all composed of adolescents' self-reports. Some of the observed relations between perceived parental attachment and adolescents' outcomes may be due to the common source. There are two important reasons to opt for the assessment of parental behavior from the adolescents' perspective. The first reason concerns the validity of adolescents' versus parents' perceptions of family relationships. Although researchers often tend to assume that parents' reports are more accurate than children's reports, several studies suggest that parental reports on their own behavior may be even more biased than children's reports (Cook & Goldstein, 1993). The second reason why adolescents' self-reports may be preferable to other sources of information concerns the importance of subjective experience. Some authors have argued that children's perception of their parents' behavior has more influence on their development than parents' actual behavior (Bronfenbrenner, 1979; Steinberg, Lamborn, Dornbusch, & Darling, 1992). The most psychologically consequential reality for adolescents is the version they construct for themselves. In summary, we assume that self-reports of adolescents are crucial in examining the relations between, for instance, parental attachment and emotional adjustment. However, information from other social sources, such as parents and friends, is not only necessary to validate the findings of our study but is also extremely helpful in directing the practical implications.

Furthermore, relational competence was measured by self-reports in our study. One may argue that it is unknown whether those who say that they are competent really are competent in the eyes of their immediate peer group. Nonetheless, other studies that used other indicators of social competence found that a secure and safe attachment is related to fewer feelings of loneliness (Kerns & Stevens, 1996), more satisfaction in intimate relationships (Hazan & Shaver, 1987), positive friendships (Sroufe & Fleeson, 1986), and a higher quantity of social interactions (Sroufe & Waters, 1977). Bartholomew and Horowitz (1991), however, interviewed adolescents' friends and found no relation between quality of friendship and parental attachment. Kerns and Stevens (1996) argued that the quality of a dyadic friendship not only depends on the perception of both individuals regarding the properties of the friendship but also depends on the match between level of parental attachment or attachment style of friends. For example, an adolescent with low levels of attachment to his or her parents may avoid potential friends with high levels of attachment but may primarily seek others similar to them. All in all, although we believe that other indicators of relational competence and social integration would not show quite different findings, the study of Kerns and Stevens (1996) clearly illustrates the importance of looking more specifically to characteristics of individual peer and family relations. For diagnostic purposes it is essential to know how perceived relational competence is related to actual competence, because adolescents who think they are competent but are not competent according to friends should be approached differently than adolescents who think that they are not competent but who are perceived by friends as competent.

A final limitation concerns the generalizability of our findings. Our sample exclusively focused on adolescents of Dutch origin (both parents had to be Dutch) who came from an intact family.

Further studies are needed to examine whether our findings hold across different samples. In addition, our sample did not include extreme groups. For example, the variation of responses on parental attachment was rather limited. The effects of overprotection or extreme low levels of parental attachment on peer relations could not be examined. Some studies reported detrimental consequences of *affectionless control*, which means low parental care and high parental overprotection in terms of depression in clinical samples (Burbach, Kashani, & Rosenberg, 1989).

Despite these limitations, this study has demonstrated that social skills and relational competence partly mediate the relationship between perceived parental attachment and emotional adjustment in middle adolescents. The data additionally suggest that this working model of social skills and relational competence does not apply for early adolescents because we found no effects of perceived attachment to parents on these concepts in the group of 12–14-year-olds. Further theoretical and empirical elaboration is required. Special attention should be paid to a longitudinal verification of our findings and examination of other mechanisms that link parental attachment to well-being in early adolescents.

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